North American Edition

Owner's Manual

Arctic Spas

www.goarctic.com

Congratulations!

Your choice of an **Arctic Spa** indicates that you are devoted to excellence. At **Arctic Spas**® we believe a good foundation is required to build a superior product, both in design and philosophy. Canadian built with the finest materials and advanced technology to withstand even the harshest of weather conditions, **Arctic Spas** are made to perform...wherever you happen to live. To safely and effectively use your spa, we recommend that you take the time to read this manual before you hook-up and operate the spa. This guide will acquaint you with the operating features, hook-up procedures, and the maintenance and safety procedures, ensuring an enjoyable experience right from the start.

If you require additional information, please call your local **Arctic Spas** dealer or check our website at www.goarctic.com

IMPORTANT!

In most cities and counties, permits will be required for the installation of electrical circuits or the construction of exterior surfaces (decks and gazebos). In addition, some communities have adopted residential barrier codes which may require fencing and/or self-closing gates on the property to prevent unsupervised access to a pool or (spa) by children under 5 years of age. Your Arctic Spa® is equipped with a locking cover that meets the ASTM F1346-91 Standard for Safety Covers and as a result, is usually exempt from most barrier requirements. As a general practice, your local Building Department will inform you of any applicable barrier requirements at the time a permit is obtained for the installation of an electrical circuit. Your Arctic Spa® Dealer can provide information on which permits may be required.

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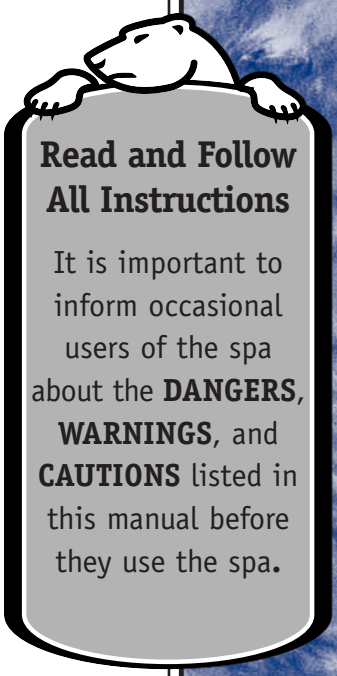

Read and Follow All Instructions
It is important to inform occasional users of the spa about the **DANGERS**, **WARNINGS**, and **CAUTIONS** listed in this manual before they use the spa.

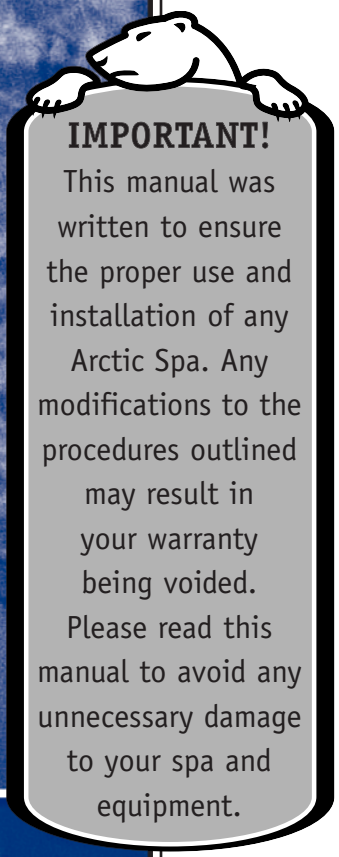
CAUTION!	**DANGER!**	**WARNING!**
Indicates a situation in which damage to equipment or material may occur.	Indicates risk of injury.	Indicates information of critical importance.

Important Safety Instructions:

READ AND FOLLOW ALL INSTRUCTIONS CAREFULLY

When installing and using this electrical equipment, basic safety precautions should always be followed, including:

1) **WARNING:** To reduce the risk of injury, do not permit children to use this product unless they are closely supervised at all times.
2) **WARNING:** A grounding wire connector is provided on this unit to connect a minimum No. 8 AWG solid copper conductor between this unit and any metal equipment, metal enclosures of electrical equipment, metal water pipe, or conduit within 5 feet (1.5m) of the unit.
3) **DANGER:** Risk of Accidental Drowning. Extreme caution must be exercised to prevent unauthorized access by children. To avoid accidents, ensure that children cannot use this hot tub unless they are supervised at all times.
4) **DANGER:** Risk of Injury. The suction fittings in this hot tub are sized to match the specific water flow created by the pump. Should the need arise to replace the suction fittings or the pump, be sure that the flow rates are compatible. Never operate the hot tub if the suction fittings are broken or missing. Never replace a suction fitting with one rated less than the flow rate marked on the original suction fitting.
5) **DANGER:** Risk of Electric Shock. Install at least 5 feet (1.5m), from all metal surfaces. As an alternative, a hot tub may be installed within 5 feet (1.5m) of metal surfaces if each metal surface is permanently connected (bonded) by a minimum No. 8 AWG (8.4 mm 2) solid copper conductor attached to the wire connector on the grounding lug, inside the equipment compartment on the equipment box.
6) **DANGER:** Risk of Electric Shock. Do not permit any electrical appliance, such as a light, telephone, radio, television, etc. within 5 feet (1.5m) of a hot tub.
7) **ELECTRICAL SUPPLY:** The electrical supply for this product must include a suitable circuit breaker to open all ungrounded supply conductors. The disconnect must be readily accessible and visible to the hot tub occupant but installed at least 5 feet (1.5m), from the hot tub water.
8) **WARNING:** To Reduce the Risk of Injury:
   a) The water in a hot tub should never exceed 104°F (40°C). Water temperatures between 100°F (38°C) and 104°F (40°C) are considered safe for a healthy adult. Lower water temperatures are recommended for young children and when hot tub use exceeds 10 minutes.
   b) Since excessive water temperatures have a high potential for causing fetal damage during the early months of pregnancy, pregnant or possibly pregnant women should limit hot tub water temperatures to 100°F (38°C). If pregnant, please consult your physician before using a hot tub.
   c) Before entering the hot tub, the user should measure the water temperature with an accurate thermometer since the tolerance of water temperature regulating devices may vary as much as +/- 5°F (2°C).
   d) The use of alcohol, drugs, or medication before or during hot tub use may lead to unconsciousness with the possibility of drowning.


IMPORTANT!
This manual was written to ensure the proper use and installation of any Arctic Spa. Any modifications to the procedures outlined may result in your warranty being voided. Please read this manual to avoid any unnecessary damage to your spa and equipment.

e) Persons suffering from obesity or a medical history of heart disease, low or high blood pressure, circulatory system problems, or diabetes should consult a physician before using a hot tub.

f) Persons using medication should consult a physician before using a hot tub since some medication may induce drowsiness, while other medication may affect heart rate, blood pressure, and circulation.

9) At least two lugs marked "Bonding Lugs" are provided on the external surface or on the inside of the supply terminal box/compartment. To reduce the risk of electric shock, connect the local common bonding grid in the area of the hot tub to these terminals with an insulated or bare copper conductor not smaller than No. 6 AWG.

10) All field-installed metal components such as rails, ladders, drains or other similar hardware within 10 feet (3m) of the hot tub shall be bonded to the equipment grounding buss with copper conductors not smaller than No. 6 AWG.

11) Use the hot tub straps and clip tie downs to secure the cover when not in use. This will help to discourage unsupervised children from entering the hot tub and keep the hot tub cover secure in high-wind conditions. There is no representation that the cover, clip tie downs, or actual locks will prevent access to the hot tub.

WARNINGS!

WARNING: Children should not use hot tubs without adult supervision.

AVERTISSEMENT: NE PAS LAISSER LES ENFANTS UTILISER LA CUVE DE RELAXATION SANS SURVEILLANCE.

WARNING: Do not use hot tubs unless all suction guards are installed to prevent body and hair entrapment.

AVERTISSEMENT: NE PAS UTILISER LA CUVE DE RELAXATION SI ESGRILLES DE PRISE D'ASPIRATION NE SONT PAS TOUTES EN PLACE, POUR EVITER QUE LES CHEVEUX OU UNE PARTIE DU CORPS SOIENT ASPIRES

WARNING: People with infectious diseases should not use a hot tub.

AVERTISSEMENT: LES PERSONNES ATTEINTES DE MALADIES INFECTIEUSES NE DEVRAIENT PAS UTILISER LA CUVE DE RELAXATION.

WARNING: To avoid injury, exercise care when entering or exiting the hot tub.

AVERTISSEMENT: POUR EVITER DES BLESSURES, SOYEZ PRUDENT EN ENTRANT ET SORTANT DE LA CUVE DE RELAXATION.

WARNING: Do not use drugs or alcohol before or during the use of a hot tub to avoid unconsciousness and possible drowning.

AVERTISSEMENT: POUR EVITER L'EVANOUISSEMENT ET LA NOYADE EVENTUELLE, NE PRENDRE NI DROGUE NI ALCOOL AVANT D'UTILISER LA CUVE DE RELAXATION NI QUAND ON S'Y TROUVE.

WARNING: Pregnant or possibly pregnant women should consult a physician before using a hot tub.

AVERTISSEMENT: LES FEMMES ENCEINTES, QUE LEUR GROSSESSE SOIT CONFIRMEE OU NON, DEVRAIENT CONSULTER UN MEDECIN AVANT D'UTILISER LA CUVE DE RELAXATION.

WARNING: Water temperature in excess of 100°F (38°C) may be injurious to your health.

AVERTISSEMENT: IL PEUT ETRE DANGEREUX POUR LA SANTE DE SE PLONGER DANS DE L'EAU A PLUS DE 38°C.

WARNING: Before entering the hot tub, measure the water temperature with an accurate thermometer.

AVERTISSEMENT: AVANT D'UTILISER UNE CUVE DE RELAXATION MESURER LA TEMPERATURE DE L'EAU A L'AIDE D'UN THERMOMETRE PRECIS.

WARNING: Do not use a hot tub immediately following strenuous exercise.

AVERTISSEMENT: NE PAS UTILISER LA CUVE DE RELAXATION IMMEDIATEMENT APRES UN EXERCICE FATIGANT.

WARNING: Prolonged immersion in a hot tub may be injurious to your health.

AVERTISSEMENT: RESTER TROP LONGTEMPS DANS LA CUVE DE RELAXATION PEUT ETRE DANGEREUX POUR LA SANTE.

WARNING: Do not permit electric appliances (such as light, telephone, radio, television, etc.) within 5 feet (1.5m) of this hot tub.

AVERTISSEMENT: NE PAS PLACER D'APPAREIL ELECTRIQUE (LUMINAIR, TELEPHONE, RADIO, TELEVISEUR, ETC.) A MOINS DE 1.5M DE LA CUVE DE RELAXATION.

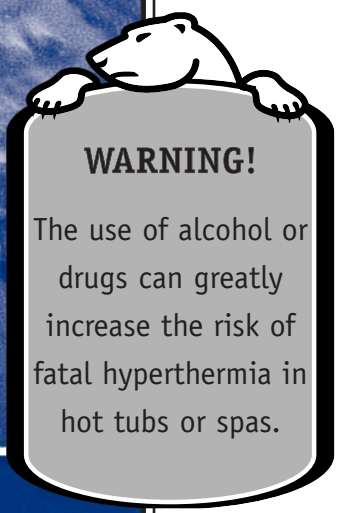
CAUTION: Maintain water chemistry in accordance with manufacturer's instructions.

ATTENTION: LA TENEUR DE L'EAU EN MATIERES DISSOUTES DOIT ETRE CONFORME AUX DIRECTIVES DU FABRICANT.

WARNING: The use of alcohol or drugs can greatly increase the risk of fatal hyperthermia in hot tubs.

AVERTISSEMENT: LA CONSOMMATION D'ALCOOL OU DE DROGUE AUGMENTE CONSIDERABLEMENT LES RISQUES D'HYPERTHERMIE MORTELLE DANS UNE CUVE DE RELAXATION.

Hyperthermia



Prolonged immersion in hot water may induce hyperthermia.

Hyperthermia occurs when the internal temperature of the body reaches a level several degrees above the normal body temperature of 98.6°F (37°C). The symptoms of hyperthermia include drowsiness, lethargy, and an increase in the internal temperature of the body. The effects of hyperthermia include:

- Unawareness of impending hazard;
- Failure to perceive heat;
- Failure to recognize the need to exit hot tub;
- Physical inability to exit hot tub;
- Fetal damage in pregnant women; and
- Unconsciousness and danger of drowning.

SPA SPECIFICATIONS

	Outside Dimensions	Height	Heater (Watts)	Water Capacity	Dry Weight	Filled Weight*	Weight per square foot	Electrical Requirements
Tundra	92 3/4" x 92 3/4" 235.6 cm x 235.6 cm	38 3/4" 93.3 cm	5500	540 Gallons 2044 Litres	850 Lbs 386 Kg	6952 Lbs 3160 Kg	108 Lbs. per square foot	230 Volt, 50 Amp Single Phase GFCI Protected Circuit
Avalanche	92 3/4" x 92 3/4" 235.6 cm x 235.6 cm	38 3/4" 93.3 cm	5500	490 Gallons 1855 Litres	850 Lbs 386 Kg	6949 Lbs 3152 Kg	83 Lbs. per square foot	230 Volt, 50 Amp Single Phase GFCI Protected Circuit
Summit	92 3/4" x 92 3/4" 235.6 cm x 235.6 cm	38 3/4" 93.3 cm	5500	390 Gallons 1476 Litres	850 Lbs 386 Kg	5311 Lbs 2409 Kg	93 Lbs. per square foot	230 Volt, 50 Amp Single Phase GFCI Protected Circuit
Kodiak	92 3/4" x 92 3/4" 235.6 cm x 235.6 cm	38 3/4" 93.3 cm	5500	418 Gallons 1582 Litres	850 Lbs 386 Kg	5946 Lbs 2697 Kg	108 Lbs. per square foot	230 Volt, 50 Amp Single Phase GFCI Protected Circuit
Klondiker	92 3/4" x 92 3/4" 235.6 cm x 235.6 cm	38 3/4" 93.3 cm	5500	400 Gallons 1514 Litres	850 Lbs 386 Kg	5395 Lbs 2447 Kg	84 Lbs. per square foot	230 Volt, 50 Amp Single Phase GFCI Protected Circuit
Cub	85 1/4" x 85 1/4" 216.5 cm x 216.5 cm	34 1/2" 87.6 cm	5500	350 Gallons 1325 Litres	750 Lbs 340 Kg	4877 Lbs 2212 Kg	100 Lbs. per square foot	230 Volt, 50 Amp Single Phase GFCI Protected Circuit
Yukon	85 1/4" x 85 1/4" 216.5 cm x 216.5 cm	34 1/2" 87.6 cm	5500	363 Gallons 1374 Litres	750 Lbs 340 Kg	4967 Lbs 2253 Kg	101 Lbs. per square foot	230 Volt, 50 Amp Single Phase GFCI Protected Circuit
Timberwolf	85 1/4" x 85 1/4" 217 cm x 217 cm	34 1/2" 88 cm	5500	356 Gallons 1347 Litres	750 Lbs 340 Kg	5126 Lbs 2325 Kg	105 Lbs. per square foot	230 Volt, 50 Amp Single Phase GFCI Protected Circuit
Husky	85 1/4" x 76" 216.5 cm x 193 cm	31" 78.7 cm	5500	310 Gallons 1173 Litres	525 Lbs 238 Kg	4123 Lbs 1870 Kg	92 Lbs. per square foot	230 Volt, 50 Amp Single Phase GFCI Protected Circuit
Marmot	76" x 56 3/4" 193 cm x 144.1 cm	29 1/2" 74.9 cm	5500	130 Gallons 492 Litres	394 Lbs 147 Kg	1812 Lbs 822 Kg	60 Lbs. per square foot	230 Volt, 50 Amp Single Phase GFCI Protected Circuit

*Filled weight includes weight of water and max number of people in the spa.

Installation Instructions

Site Preparation

Make sure you ensure the following:

- Always put your spa on a structurally sound, level surface. A filled spa can weigh a great deal. Make certain that the location you choose can support the weight of your filled spa.
- Locate your equipment compartment, which houses all of the electrical components, in a place where you will have easy access for periodic spa care and maintenance.
- Allow adequate access to all other doors for service.

Outdoor Ground Level Installation

No matter where you install your new spa, it's important that you have a solid foundation for support. If you are installing a spa with a wooden pedestal floor outdoors, we recommend you place patio stones underneath spaced out evenly. The stones should be at least two inches thick and twelve inches square. Even with stones in place, the spa will possibly settle and become unlevel, and may require re-leveling over time. If you are installing a spa with a Forever Floor™ outdoors, you may set it on virtually any surface, as long as it is level.

Deck Installation

To be certain your deck can support your spa, you must know the deck's maximum load capacity. Consult a qualified building contractor or structural engineer. To find the weight of your spa, its contents and occupants, refer to the Spa Specification chart. This weight per square foot must not exceed the structure's rated capacity, or serious structural damage could result.

Indoor/Basement Installation

If you are installing your spa indoors, there some special requirements. Flooring materials must provide a good grip when wet. Proper drainage is essential to prevent a build-up of water around the spa. When building a new room for the spa it is recommended that a floor drain be installed. Check for moisture's effects on exposed wood, drywall, etc. in the room. To minimize these effects, it is best to provide plenty of ventilation to the spa area. An architect can help to determine if more ventilation must be installed.

Your Arctic Spas® Dealer can help you with local information such as zoning regulations and building codes.

WARNING! WARNING!
We recommend that the Arctic Spa® be installed above ground. Consult a licensed building contractor to design or evaluate your custom decking requirements.

Electrical Specifications

WARNING!

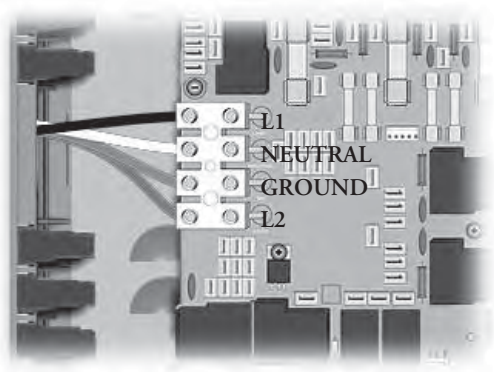
All electrical hookups must be performed by a licensed electrician!

Power Input

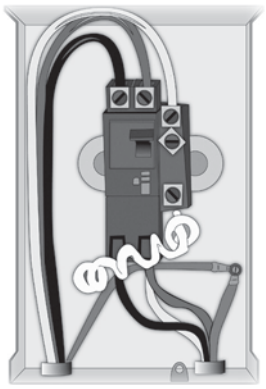
All Arctic Spas are tested for the following:

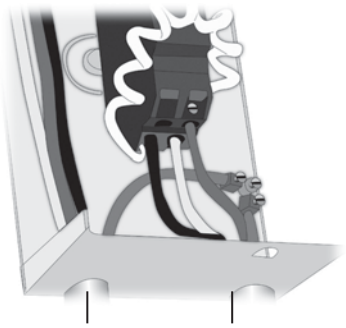
240 VAC, 60 Hz, 50 A (North America)

Connect the power input wires to the terminal block labeled “AC-Input”. Make sure to respect the alignment and that the screws are properly tightened.



Sub Panel Wiring Diagram Example





IMPORTANT CONNECTIONS:
Neutral of the GFCI must be connected to the neutral bus.

Neutral from the spa must be connected to the breaker.

DANGER!

Shock Hazard.
DO NOT PROCEED if you are not a licensed electrician.
This diagram is for reference only!

Electrical Installation Instructions

ARCTIC SPAS® MUST BE WIRED IN ACCORDANCE WITH ALL APPLICABLE LOCAL ELECTRICAL CODES. ALL ELECTRICAL WORK SHOULD BE DONE BY AN EXPERIENCED, LICENSED ELECTRICIAN AND APPROVED BY A LOCAL BUILDING/ELECTRICAL INSPECTION AUTHORITY. WE RECOMMEND THE USE OF APPROPRIATE ELECTRICAL CONDUIT, FITTINGS AND WIRE FOR ALL CIRCUITS.

We recommend an electrical subpanel containing a 50 amp GFCI breaker is used to supply power and protect the spa. This subpanel requires a 50 amp, two pole, single phase, 230 volt, four wire service (two line, one neutral, one ground). The grounding conductor must be at least the same gauge as the line conductors, but not less than #6 AWG (Canada), and #8 AWG (USA). A minimum #6 AWG (Canada), and #8 AWG (USA) solid copper bond wire is also required. Mount the subpanel in the vicinity of the spa, but not closer than five feet away, in accordance with all local codes. The electrical circuit must be installed by a qualified electrician.

1. This hot tub must be permanently connected (hard-wired) to the power supply. No plug-in connections or extension cords are to be used in conjunction with the operation of this hot tub. Supplying power to the hot tub which is not in accordance with these instructions will void both the independent testing agency listing and the manufacturer's warranty.
2. The power supplied to this hot tub must be a dedicated circuit with no other appliances or lights sharing the power provided by the circuit.
3. Do not use aluminum wire.
4. For the United States, the electrical supply for this product must include a suitably rated switch or circuit breaker to open all ungrounded supply conductors to comply with Section 422-20 of the National Electrical Code, ANSI/NFPA 70. The disconnecting means must be readily accessible to the hot tub's occupant but installed at least 5 feet (1.5m) from hot tub water.
5. The electrical circuit supplied for the hot tub must include a suitable ground fault circuit interruptor (GFCI) as required by electrical code.
6. To gain access to the hot tub's power terminal block, remove the four screws securing the two cabinet panels on the side of the spa containing the ETL label. Then open the door to the control box. (See diagram on previous page).
7. Install the cable with appropriate connector through the large opening provided in the side of the control box.

8. Connect wires, color to color, on terminal blocks TB1. TIGHTEN SECURELY! All wires must be hooked up or damage could result.
9. Close the control box door and reinstall the cabinet side panel.

WARNING: Fill the spa with water before turning on the power.

Once your spa has been filled with water, turn it on and test all of the circuit breakers.

NOTE: If the GFCI breaker trips immediately, verify that the WHITE neutral wire is connected into the load neutral in the breaker. Each breaker should be tested prior to each use. Here's how:

1. Push the "TEST" button on each GFCI breaker, and observe it click OFF.
2. Push the breaker switch to the OFF position (to ensure that it has completely disengaged), then push the breaker switch to the ON position.

If any of the GFCI breakers fails to operate in this manner, your spa may have an electrical malfunction, and you may be at risk of electrical shock. Turn off all circuits and do not use the spa until the problem has been corrected by an authorized service agent.

WARNING: Removing or bypassing any GFCI breaker will result in an unsafe spa and will void the spa's warranty.

IMPORTANT: Should you ever find the need to move or relocate your Arctic Spa®, it is essential that you understand and apply these installation requirements. Your Arctic Spa® has been carefully engineered to provide maximum safety against electric shock. Remember, connecting the spa to an improperly wired circuit will negate many of its safety features.

Startup Procedures

IMPORTANT:

Your Arctic Spa® has been thoroughly tested during the manufacturing process to ensure reliability and long-term customer satisfaction. Before filling the spa, wipe the spa shell clean with a soft rag.

The following instructions must be read and followed exactly to ensure a successful start-up or refill.

1) Ensure the electrical connections have been made in accordance with this manual.

2) Ensure all O-Rings have been installed into unions and unions have been tightened sufficiently.

3) Ensure all ball valves are open, and the drain has been closed.

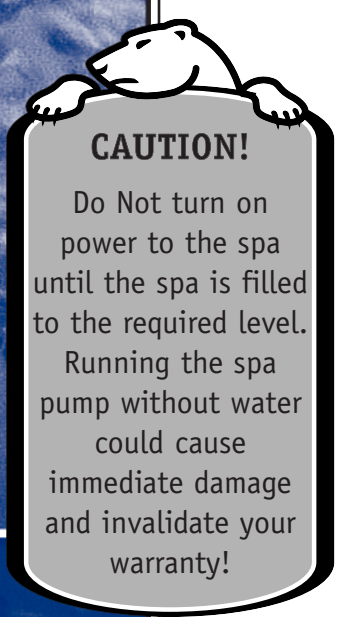
4) Fill the spa with water to approximately 4" from the top of the spa with a garden hose.

5) Once the spa is filled to the proper level, turn the power to the spa on, by turning on the GFCI breaker in your panel. Watch the display on the topside control. After power-up, the display will blink until a key is pressed. This feature is to let you know that there was a power outage.

6) The jet pump, heating system and all internal plumbing will achieve a partial prime as the spa is filled. To check the operation of the jet system and to remove any remaining air from the heating system, push the JETS button twice (for Signature series spas, push both JETS 1 and JETS 2 buttons and JETS 3 for Legend series spas) to make the jet pump(s) run on high speed for one minute. Once the jet system is fully operational (as indicated by strong, non-surging jets), priming of the spa is complete. Weak or surging jets are an indication of a low water level condition or clogged filter cartridges.

7) Adjust the chemicals and balance the water according to your dealer's instructions. A guideline is also included in this manual, under the Water Maintenance Section.

8) Set the temperature control to the desired temperature (between 100°F and 104°F), then place the insulated cover on the spa and allow the water temperature to stabilize (approximately 16 hours). Make sure you secure the cover in place using the cover locks. Periodically check the spa water temperature. When the water temperature climbs above 85°F, proceed to the next step.


CAUTION!
Do Not turn on power to the spa until the spa is filled to the required level. Running the spa pump without water could cause immediate damage and invalidate your warranty!

9) Test and Adjust Sanitizer level (Chlorine ideal 1-3 ppm or Bromine ideal 3-5 ppm).

10) Rotate "VOS Diverters" to centre position and press "PUMP 2" button on topside control panel for 5 seconds to activate the "Boost filtration system", this will ensure sufficient circulation and filtration for entire jetting system. When enabled, "BOO" message is displayed.

11) The spa temperature is pre-programmed to reach 102°F, and will normally do so within 16 to 24 hours. You may raise the water temperature by pressing the TEMP (^) button on the control panel, or lower it by pressing TEMP (v) button. After a few hours, the water temperature will remain within 1 degree of your selected temperature. To prevent tampering, you can lock your desired temperature setting. Refer to the Spa Control Functions section for details.

Fusion™ Jetting System

With your Fusion™ Jetting System, you can control the massaging action of your spa. Using the Fusion™ diverter lever, the jets are activated in groups, known as jet systems. The jetting systems are selected by turning the diverter lever from one side to the other, or select both by leaving the diverter lever in the middle. The number of diverter levers you will have will depend on the model and series of Arctic Spa you have. Feel free to consult your local dealer with any questions regarding the function of this system, or just jump in and experiment for yourself.

Venturi Controls

The Venturi Controls allow you to control the intensity of the massage at each jet by adjusting the mixture of air and water. Simply turn the venturi control lever counter clockwise for a stronger flow and clockwise for a softer flow. Most jets are adjustable by turning the face of the jet clockwise for a stronger flow and counter-clockwise for a softer flow and eventually off.

Jets

Master Massage Jet

The Master Massage jet is a large multi-orifice jet designed specifically for your lower back, because its high flow - low pressure action gently massages the soft tissue in this area without irritating it. The intensity of the Master Massage Jet can be altered using one of the Fusion™ Diverter levers (the location varies depending on spa model). Consult your local dealer regarding which diverter lever or just jump in and experiment for yourself.

Hydromassage Jets

The Hydromassage jets have five different nozzle options: Flex, Pulse, Twin Pulse, Flurry, and Blizzard. The Flex jet nozzle allows you to aim the water in the direction that feels best. The Pulse jet gives a wide circular massage, and the Twin Pulse, Flurry, and Blizzard jets divide the water flow into varying streams and spinning patterns for a more customized circular massage. These jets are adjustable by turning the face of the jet clockwise for a stronger flow and counter-clockwise for a softer flow and eventually off.

Mini Jets

The Hydromassage jets have four different nozzle options: Mini Flex, Mini Pulse, Mini Twin Pulse, and Mini Flurry. The Mini Flex nozzle allows you to aim the water in the direction that feels best. The Mini Pulse jet spins quickly for a more centralized circular massage. The Mini Twin Pulse and the Mini Flurry jets change the water flow into multiple streams for a complete massage. These jets are designed to massage the muscles in your upper back, shoulders and neck, thoroughly. These jets are adjustable by turning the face of the jet clockwise for a stronger flow and counter-clockwise for a softer flow and eventually off.

Orca Jet

The Orca Jet is a large orifice hydromassage jet designed to maximize massaging action on a specific area of the body. It is located in the lower part of the spa to allow easy access for massaging feet, legs, hips and lower back. The intensity of the Orca Jet can be altered using one of the Fusion™ Diverter levers (the location varies depending on spa model). Consult your local dealer regarding which diverter lever or just jump in and experiment for yourself.

Therapy Air Pads *(optional on all series except Legend SE)*

When the Therapy Air System is turned on (see spa control functions), soft air bubbles all around you for an exhilarate massage.

Spa Control Functions

IMPORTANT. Before performing any service on the spa, contact your local Factory Authorized Dealer. Make a visual inspection of the spa to get an understanding of what condition it may be in and if anything look out of the ordinary. If any part appears to be damage, loose or missing, do not proceed. Contact your Factory Authorized Dealer immediately.

Your spa control has been specifically designed so that by simply connecting the spa to its properly grounded source, and following the start-up procedures in this manual, the spa will automatically heat to the set temperature. You can adjust the set temperature by pressing the up or down arrows on your control panel to the desired temperature. When your spa is heating the heat indicator on your control panel will be on.

Power-Up Detection

After a power-up, on the first 10 seconds the display will alternate between the software number and revision, the display will then blink until somebody presses a key. This feature lets you know that a power failure has occurred and all settings have returned to default.

Panel Lock

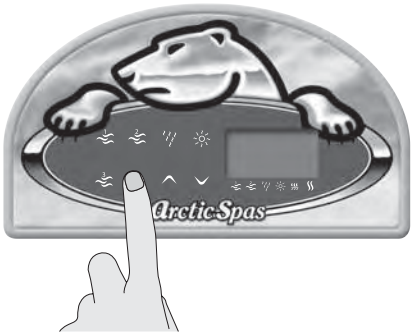
It is possible to lock out all the keys. This feature is helpful when young children could have access to the keypad. **To lock/unlock the keypad, simply press on the Pump #1 key for at least 5 seconds.**

There are 2 keypad lock modes: the full lock, or the partial lock. The full lock, as the name implies, locks ALL keypad functions. The partial lock locks only the programming functions; the Pump, Blower, and Light keys remain useable.

To lock, press on the Pump #1 key for 5 seconds. At that point, "LocP" will be displayed. If the key is released at this time, keypad will be in partial lock. However, if lock key is kept pressed for another 5 seconds, "LocF" will appear and the keypad will be fully locked.

When the keypad is locked, all automatic functions of the system run as usual. However, when a locked key is pressed, an "LocP" or "LocF" message is displayed for 1 second.

Also note that a power-up unlocks the keypad.



Invert Display

It is possible to invert the display so that the display is readable from either inside or outside the spa. To do this, just press on the filter key for 5 sec to toggle between the inverted mode or not.

Temperature displayed in Fahrenheit or Celsius

The temperature can be displayed in Fahrenheit or Celsius. To toggle between those choices, press on light key for five seconds.

Note that after a power-up the system always return to default Fahrenheit display.

Boost Filtration mode

This mode is used to speed-up filtration after intensive use of the spas or to help mix chemical just added in the spa. Press the PUMP2 key for 5 seconds to enable the Boost Filtration mode. In this mode, the Pump1 high speed and the ozonator will operate during 45 minutes. When enabled, 'BOO' message is displayed.

Clean filter reminder

This message is displayed to remind you to clean the filter cartridge on the spa. The display will start blinking with the 'CLE'. The message will clear itself by pressing any key on the keypad. Replace with an Arctic Pure™ disposable filter cartridge every three (3) months. For the Marmot replace with two filbur #SC-3077B filter cartridges.

Topside Control Panel Buttons

The topside control panel has buttons which you press to set the temperature, initiate the filtrations cycle, turn the light on, and activate or deactivate the pump(s) and blower. The Topside control panel display responds to let you know you have pressed a button, and that the selected function has been performed.

Temperature Control (Up & Down Arrows)

These keys are used to set the temperature of the water. As soon as you press one of these keys, the display will show the current set point and will keep showing it for 5 seconds after releasing the key. Pressing the keys will either increase or decrease the current set point. The Set Point logo on the display tells you if the display shows the current set point or the actual temperature of the water.

The water temperature can be adjusted in 1 degree increments from 59 to 104°F (or from 15 to 40°C). After a power down, the default set point is 102°F (39°C).

Pump 1 Button

Press the Pump 1 key to turn Pump 1 on. A second press will change Pump 1 speed. A third press will turn Pump 1 off. Note: You may not be able to shut Pump 1 off if in a filter or heating cycle. A built-in timer will shut Pump 1 off 20 minutes after it has been started.

The Pump 1 ON triangular icon will appear solid on the display when Pump 1 is running at high speed. It will flash when Pump 1 is running at low speed.

Pump 2 Button *(Optional)*

Press the Pump 2 key to turn Pump 2 on High speed. A second press will turn Pump 2 off. If Pump 2 is left on, it will automatically shut off 20 minutes after it has been started.

The Pump 2 ON triangle icon will appear solid on the display when Pump 2 is running at high speed.

Pump 3 (On/Off Button) *(Optional)*

Press the Pump 3 key to turn Pump 3 on High speed. A second press will turn Pump 3 off. If Pump 3 is left on, it will automatically shut off 20 minutes after it has been started.

The Pump 3 ON triangle icon will appear solid on the display when Pump 3 is running at high speed.

Note: If Pump 3 is not present, then this switch is used only for the On/Off mode. A long press (5 seconds) on Pump 3 key is used to turn the entire system on or off. When power is applied to the unit, it is "On" by default.

When the system is "Off", all outputs are turned off for 30 minutes and the display shows "OFF" for at least 10 seconds. The filter cycle, the Smart Winter mode (see pg 19) and the heater can't start during this time. All keys are disabled except the On/Off key to restart the system before the 30 minutes ends.

Therapy Air Button *(Optional)*

Press the Therapy Air key to turn Therapy Air on. A second press will turn Therapy Air off. If Therapy Air is left on, it will automatically shut off 20 minutes after it has been started.

The Therapy air ON triangle icon will appear solid on the display when Therapy air is on.

Light Button

Press the light key to turn the light and fibre-optic starbar on. A second press will turn light and fibre-optic starbar off. If the light and fibre-optic starbar are left on, they will automatically shut off 2 hours after it has been started. If the spa is equipped with Northern Lights™, the different lighting sequences can be changed by pressing the light key on and off repeatedly.

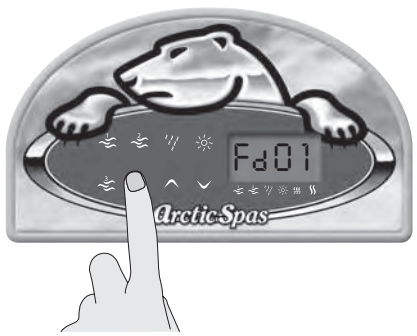
The light ON triangle icon will appear solid on the display when the light and fibre-optic starbar is on.

To Program the Duration of the Filtration Cycles:

The system will automatically perform four filtration cycles per day, 6 hours apart. During a cycle, the following sequence is executed:

* Pump 2 and blower start at high speed for 1 minute
* Pump 1 then starts and runs at low speed for the preset number of hours;
* Ozone output is turned on (optional)

To set the duration of the filtration cycles (the amount of time Pump 1 will be on), follow this procedure:



Press on the Filter Cycle key. The display will show Fd XX where XX represents the number of hours Pump 1 will be operating at low speed.

Use the Up & Down arrow keys to change the number of hours.
00 = no filtration
01 = 1 hour/cycle
02 = 2 hour/cycle

Press the filter cycle key again to display the number of cycles (FF) in a 24 hour period. You can select from 1 cycle to 4 cycles per day. The Filter Cycle triangular icon will appear on the display when a filter cycle is on.

Overtemp During Filter Cycle

In order to prevent excessive water temperatures due to long Filter cycles during warm weather, the system has a special safeguard.

If the water temperature exceeds the set point by more that 2°F (1°C), the system will cancel the Filter cycle and the Filter cycle icon will blink for the remainder of the filter cycle. The Filter cycle icon blink pattern will be: ON for 1/2 second, OFF for 1/2 second, ON for 1/2 second, and then finally OFF for 1 1/2 seconds. This sequence will then repeat. The filtration cycle will automatically reset itself once the water temperature falls below the setpoint.

Filter Cycle Suspension

During a Filter cycle, if an accessory (a pump, the blower, or the light) is used manually, the Filter cycle is suspended the time the accessories are used. Once all accessories are turned off (whether manually or by the built-in timer), the Filter cycle remains suspended for an extra 40 minutes. When a Filter cycle is suspended, the Filter cycle icon will blink.

Smart Winter Mode

This system prevents the water from freezing in the pump plumbing. If at any time the temperature goes below 68°F, the system activates the winter mode every hour for the next 24 hours. (even if the temperature returns above 68°F). In this mode, the system will start all pumps for 1 minute to circulate warmer water in the plumbing. When the pumps are running because of this protective feature, the filter cycle ICON on the display will blink.

Spa Care and Maintenance

Your Arctic Spa® is manufactured from the highest quality, most durable materials available. Even so, the spa care and maintenance program you develop will ultimately determine how long your spa and its individual components will last. Regular maintenance following the advice in this section will help you to protect your investment.

Draining the Water

Detergent residues and dissolved solids from bathing suits and chemicals will gradually accumulate in your spa's water. Normally, in about three to four months the water will become difficult to balance and should be replaced. Showering without using soap prior to entering the spa or using only the rinse cycle when laundering your bathing suit will help to reduce detergent residue in the spa water.

IMPORTANT: Remember to change your water every three to four months.

To Drain Your Spa:

1. Shut off the GFCI breaker located in the subpanel or the quick disconnect.
2. Locate the main drain valve for the spa, on the outside of the cabinet to the right of the equipment compartment. Attach the male threaded end of a garden hose to the drain valve, and route the other end of the hose to an appropriate draining area.
3. Open the valve by turning the large outside ring counterclockwise. The spa will drain by gravitational flow.

   Note: All Arctic Spas® models will drain through the floor drain. Equipment such as the pump(s) and heater will drain. All models will leave a small amount of water in the footwell. Any water remaining in the plumbing or equipment after draining will only need to be removed if the spa is being winterized.
4. When empty, inspect the spa shell and clean as required.
5. Close the drain valve.
6. Refill the spa **BEFORE** restoring power.

IMPORTANT: Always clean and rotate the filter cartridges, every couple of weeks, and each time the spa is drained for cleaning.

Filtration System

Arctic Spas® are equipped with balanced filtration, meaning that the filter cartridges are sized to meet the needs of the pump system.

As with any water filtering system, the filter cartridge may become clogged, resulting in reduced water flow. It is important to maintain a clean, unobstructed filter system. We recommend that your filter cartridge be replaced with a Arctic Pure™ disposable filter cartridge every three (3) months. For the marmot replace with two Filbur #SC-3077B filter cartridges.

Filter Cartridge Removal and Installation

1. Shut the spa down using the on/off button on the topside control panel.
2. Remove and set aside the filter cover.
3. Remove the filter basket by rotating the top outside ring counterclockwise and lifting.
4. Remove the filter cartridge.
5. Clean any debris out of the skimmer basket.
6. To reinstall the filter cartridge, reverse the order of steps in which it was removed.

Care of Spa Pillows

The spa pillows used in many of the Arctic Spas® models will provide years of comfort if treated with care. They have been positioned above the water level to minimize the bleaching effects of chlorinated water and other spa water chemicals. To extend their life, whenever the spa shell is being cleaned, the spa pillows should be removed and cleaned. Body oils can be removed with a mild soap and water solution. ALWAYS rinse off the spa pillows thoroughly to remove any soap residue. The pillows can be conditioned with Arctic Pure™ Cover Renew™ cleaner after cleaning. If the spa is not going to be used for a long period of time (that is, during a vacation or if the spa is being winterized), or when the spa water is being super-chlorinated, the spa pillows should be removed until the next use of the spa.

To remove and replace the spa pillows:

1. Carefully slide the pillow up and away from the spa shell.

   IMPORTANT: Just pulling the pillow straight out of the shell recess will damage the pillow. This is not covered under warranty.
2. To reinstall the spa pillow, carefully slide the pillow down into the spa pillow recess.

Care of the Spa Shell

Your Arctic Spa® has a fibreglass reinforced, Lucite® cast acrylic shell. Stains and dirt generally will not adhere to your spa's surface. A soft cloth or sponge should easily remove most dirt. Most household chemicals are harmful to your spa's shell.

Sodium bicarbonate (baking soda) or vinegar can also be used for minor surface cleaning. Always thoroughly rinse off any spa shell cleaning agent with fresh water.

Service Notes:

1. Iron and copper in the water can stain the spa shell if allowed to go unchecked. Your Arctic Spas® Dealer stocks Best Defence™ to use if your spa water has a high concentration of dissolved minerals.
2. The use of alcohol or any household cleaners other than those listed to clean the spa shell surface is NOT recommended. DO NOT use any cleaning products containing abrasives or solvents since they may damage the shell surface. Damage to the shell by the use of harsh chemicals in not covered under the warranty.

MANUAL SAFETY COVER

WARNING		AVERTISSEMENT	
AVOID DROWNING RISK	KEEP CHILDREN AWAY. CHILDREN OR OBJECTS CANNOT BE SEEN UNDER COVER. REMOVE COVER COMPLETELY BEFORE ENTRY - BATHERS ENTRAPMENT POSSIBLE. NON-SECURED OR IMPROPERLY SECURED COVERS ARE A HAZARD. FAILURE TO FOLLOW ALL INSTRUCTIONS MAY RESULT IN INJURY OR DROWNING.	ÊVITEZ DE NOYER LE RISQUE	ENFANTS DE SUBSISTANCE PARTIS. DES ENFANTS OU LES OBJETS NE PEUVENT PAS ÊTRE VUS SOUS LA COUVERTURE. ENLEVEZ LA COUVERTURE COMPLÊTEMENT AVANT L'BAIGNEUR - OCCLUSION D'ENTREE POSSIBLE. LES COUVERTURES NON-FIXÊES OU INCORRECTEMENT FIXÊES SONT UN RISQUE. LE MANQUEDE SUIVRE TOUTES LES INSTRUCTIONS PEUT AVOIR COMME CONSÊQUENCE LES DOMMAGES OU LA NOYADE.

Care of the Spa Cover

WARNING: The cover is a manual safety cover that meets or exceeds all prevailing requirements of ASTM Standards for spa safety covers when installed and used correctly as of the date of manufacture. Non-secured or improperly secured covers are a hazard. Open the cover to its fully open position before use. Be sure to inspect the cover for premature wear or deterioration. Over time, with use, there is a chance of normal cover wear and deterioration. To properly maintain your cover see the directions below.

Vinyl Cover

The vinyl spa cover is an attractive, durable foam insulation product. Monthly cleaning and conditioning is recommended to maintain its beauty.

To clean and condition the vinyl cover:

1. Remove the cover from the spa and gently lean it against a wall or fence.
2. With a garden hose, spray the cover to loosen and rinse away dirt or debris.
3. Using a large sponge and/or a soft bristle brush, and using a very mild soap solution or baking soda, scrub the vinyl top in a circular motion. Do not let the vinyl dry with a soap film on it before it can be rinsed clean.
4. Scrub the cover's perimeter and side flaps. Rinse clean with water.
5. Rinse off the underside of the cover with water only (use no soap), and wipe it clean with a dry rag.
6. To condition the cover after cleaning, apply a thin film of Arctic Pure™ Cover Renew™ to the vinyl surface and buff.

Care of the Spa Cabinet

Cedar Cabinet: When properly cared for, the wood cabinet of your spa will maintain its beauty for many years. Your Arctic Spa cabinet has been specially treated with Olympic Maximum Wood Stain 57503 Cedar Tint. Use this stain or a similar product on a regular basis to protect the wood of the cabinet and keep your spa looking good.

Full Metal Cabinet: This powder-coated aluminum cabinet is virtually maintenance free! The cabinet does not require the use of any chemicals or cleaners. Do not use harsh abrasives as they may scratch the finish. Any dirt that may accumulate can simply be sprayed off with a hose and/or wiped with a sponge.

Light Bulb Replacement

All Arctic Spas® come equipped with a 12 volt blue LED underwater light and fibre-optic starbar light for night use. Should you wish to change either light, follow these simple steps:

1. Make sure the light is turned off, by checking the topside to see if the light icon is not showing (operating lights are hot!).
2. Remove the screws securing the equipment access doors; remove the doors.
3. For the underwater light, locate the lamp assembly, which is secured into the light housing. Carefully rotate the lamp assembly counterclockwise until it comes off the light housing. For the Fibre Optic Starbar light, locate the lamp assembly which is slip fitted to one end of the Starbar and carefully pull it off.
4. Carefully pull the bulb from the socket and replace with a 12 volt #906 light bulb or a 12 volt blue LED for the underwater light or 12 volt blue LED for the fibre optic starbar (to gain access to bulb and socket turn the socket counterclockwise in the starbar housing and slide out).
5. To reinstall the underwater light, rotate the lamp assembly clockwise onto the light housing until secure.
6. To reinstall the Fibre Optic Starbar light, turn the socket clockwise into the starbar housing and simply slide the housing over the end of the starbar.

Vacation Care Instructions

If you plan to be away from home for 7 - 14 days, follow these instructions to ensure that the water quality of your spa is maintained.

1. Adjust pH as needed.
2. Ensure you have sufficient sanitizer to last until you return.
3. Shock the spa with Spa Boost or Refresh.

Upon your return:

1. Shock the spa with Boost or Refresh.
2. Ensure you have sufficient sanitizer for regular use.
3. Return the temperature to its original setting. You can use your spa once the residual sanitizer level falls within the ideal range.

Note: If you will not be using your spa for more then 14 days and a neighbor, friend or an outside maintenance service is not available to check and balance the water chemistry, draining or winterizing the spa is recommended.

Winterizing Your Spa

If you plan to leave your spa unused for a long period of time in severely cold weather, you should drain the spa to avoid accidental freezing due to a power or equipment failure.

We recommend your local authorized dealer winterize your spa. Freezing can severely damage your spa. Improper winterizing of your spa can void your warranty.

Arctic Spa Stereo *(Optional)*

For instructions or troubleshooting of your stereo and related equipment, please see the Owners Manual that comes with the stereo.

Water Maintenance

It's important to have clean water. Water maintenance is one of the least understood, but very important areas of spa ownership. Your dealer can guide you through the process of achieving and maintaining perfect water in your spa, given your local conditions. Your program will depend on your water's mineral content, how often you use your spa, and how many people use it. Here is our suggested step-by-step program:

General Information

There are three fundamental areas of water maintenance. They are (1) Water Filtration, (2) Water Sanitation, and (3) Chemical Balance/pH Control.

Although your spa's filter system is working several hours a day to remove particles from your water, it does not remove bacteria or viruses. Water sanitation is the responsibility of the spa owner. It can be achieved through the regular and periodic (daily, if necessary) addition of an approved sanitizer. The sanitizer will chemically control the bacteria and viruses present in the spa water. Bacteria and viruses can grow quickly in undersanitized spa water. The water's chemical balance and pH control are also the responsibility of the spa owner. You will have to add chemicals to maintain proper levels of Total Alkalinity (TA), Calcium Hardness (CH) and pH. Proper water balance and pH control will minimize scale buildup and corrosion of metals, extend the life of the spa, and allow the sanitizer to work at maximum efficiency.

Methods For Testing The Spa Water

Accurate water testing and analysis are an important part of effectively maintaining your spa water. To follow the Arctic Spas® recommended program, you must have the ability to test for:

- Total Alkalinity (TA)
- Calcium Hardness (CH)
- pH
- Sanitizer

Although reagent liquid test kits provide the highest level of accuracy, Test Strips are the most convenient testing method used by many spa owners. Keep in mind that test strips are susceptible to heat and moisture contamination, which will result in inaccurate readings.

IMPORTANT: Always read and carefully follow the directions included with the Test Kit or Test Strips to ensure the accuracy of the test results.

Hints For Successful Water Testing

When using the reagent test kit:

- Always take water samples 12"- 18" below the water surface.
- Rinse the test cells before and after each use.
- Do not dispose of test samples into the spa water.

- When adding drops of chemicals from the kit (the reagents) into the test block, hold the bottle vertically and add the drops slowly to be sure the correct quantity is used.
- The reagents should be replaced on a yearly basis to maintain the accuracy of the test results.

Basic Chemical Safety

When using chemicals, read the labels carefully and follow directions precisely. Though chemicals protect you and your spa when used correctly, they can be hazardous in concentrated form. Always observe the following guidelines:

- ALWAYS KEEP CHEMICALS OUT OF CHILDREN'S REACH.
- Accurately measure the exact quantities specified, never more. Do not overdose your spa.
- Store chemicals in a cool, dry, well ventilated place.
- Always keep chemical containers closed when not in use.
- Don't inhale fumes or allow chemicals to come in contact with your eyes, nose, or mouth. Wash your hands immediately after use.
- Follow the emergency advice on the product label in case of accidental contact.
- Never smoke around chemicals. Some fumes can be highly flammable.
- Don't store any chemicals in the spa equipment compartment.

Adding Chemicals to the Spa

Most chemicals (does not include any slow dissolving chemicals) can be added directly to the spa while the pump(s) is running on high speed, for a minimum of 10 minutes.

IMPORTANT WHEN USING BOOST™ OR REFRESH™ TREATMENT NOTE: After administering a super chlorination treatment or non-chlorine shock to your spa, leave the cover open for a minimum of 20 minutes to allow the oxidizer gas to vent. A high concentration of trapped oxidizer gas which may exist as a result of the shock treatment (not daily sanitation) may eventually cause discoloration or vinyl degradation to the bottom of the cover. This type of damage is considered chemical abuse and is not covered under warranty.

The Arctic Pure™ Water Maintenance Program

Following the Arctic Pure™ water maintenance program will save you time and frustration and ensure clear, clean spa water.

Remove Excess Minerals

Most tap water has minerals such as Calcium, Copper, Iron, Manganese and Sodium in it, and the circulation of water can cause the erosion of metals from spa equipment which can present possible scaling and staining problems in your spa. To remove these simply fill your spa with an Arctic Pure™ Pre-Filter. In extreme cases of source water with high minerals (such as some well water):

1. We recommend you add 50ml (1.5 ounces) of Arctic Pure™ Best Defense per 1000 litres (264 gallons) of water while filling your spa.

2. Also, as water evaporates from your spa and new water is added, the amount of dissolved minerals will increase. The spa water may eventually become "hard" (Calcium Hardness too high) enough to damage the heater by calcifying its surface. To protect against these problems add 15ml (1/2 ounce) per 1000 litres (264 gallons) of Arctic Pure™ Best Defense weekly.

Balance The Total Alkalinity (TA)

1. The recommended Total Alkalinity (TA) for your spa water is 125-150 ppm.
2. Total Alkalinity is a measure of the total levels of carbonates, bicarbonates, hydroxides, and other alkaline substances in the water. TA is referred to as the water's "pH buffer". In other words, it's a measure of the ability of the water to resist changes in pH level.
3. If the TA is too low, the pH level will fluctuate widely from high to low. Fluctuations in pH can cause corrosion or scaling of the spa components. Low TA can be corrected by adding Arctic Pure™ Perfect Balance.
4. If the Total Alkalinity is too high, the pH level will tend to be high and may be difficult to bring down. It can be lowered by using Arctic Pure™ Adjust Down.
5. Once the TA is balanced, it normally remains stable, although some sanitizers, and the addition of more water with a high or low alkalinity will raise or lower the TA reading of the water.
6. When the Total Alkalinity is within the recommended range, proceed to the next step.

Balancing The PH

1. We recommended a slightly higher pH range for your spa water; 7.4-7.8.
2. The pH level is the measure of acidity and alkalinity. Values above 7 are alkaline; those below 7 are acidic. Maintaining the proper pH level is extremely important for:
   - Optimizing the effectiveness of the sanitizer.
   - Maintaining water that is comfortable for the user.
   - Preventing equipment deterioration.
3. If the spa water's pH level is too low, the following may result:
   - The sanitizer will dissipate rapidly.
   - The water may become irritating to spa users.
   - The spa's equipment may corrode.

   If the pH is too low, it can be increased by adding Arctic Pure™ Adjust Up to the spa water.
4. If the pH level is too high, the following may result:
   - The sanitizer is less effective.
   - Scale will form on the spa shell surface and the equipment.
   - The water may become cloudy.

If the pH is too high, it can be decreased by adding Arctic Pure™ Adjust Down to the spa water.

5. It is important to check the pH on a regular basis. The pH will be affected by the bather load, the addition of new water, the addition of various chemicals, and the type of sanitizer used.

6. When the pH is within the recommended range, proceed to the final step.

Calcium Hardness (CH)

1. Most spa manufacturers recommend a Calcium Hardness (CH) level for your spa of 150-200 ppm. HOWEVER, WE DO NOT RECOMMEND ADDING CALCIUM TO YOUR SPA.

2. Calcium Hardness is a measure of the total amount of dissolved calcium in the water. It is believed that calcium helps control the corrosive nature of water. Calcium has two major problems in Hot Water Chemistry: (1) it has a tendency to precipitate (fall out of suspension in high temperatures) and (2) high pH will cause calcium to precipitate. The problem with calcium falling out of suspension is that it collects on the heater and pump, and shortens their life.

3. Any natural corrosiveness in the water can be combatted by maintaining a slightly higher Total Alkalinity Level.

Sanitize The Spa

Sanitizer is extremely important for killing algae, bacteria and viruses, and preventing unwanted organisms from growing in the spa. At the same time, you don't want too high a sanitizer level, or it can irritate your skin, lungs and eyes.

1. Always maintain the sanitizer level in your spa at the recommended level for each type of sanitizer.
2. We recommend the following sanitizers:
   - Arctic Pure™ Sanitize C
   - Arctic Pure™ Sanitize B
   - Arctic Pure™ Peak Boost
   - Arctic Pure™ Spa Boost

Using Arctic Pure™ Sanitize C

1. Add pucks to floating dispenser and open to 4.
2. Add two tablespoons of Arctic Pure™ Refresh per 1000 litres (265 Gallons) of water.
3. Test the Chlorine level. Once bromine reads within the ideal range turn tablet dispenser down to 1 - 2 (adjust as needed for bather load).

Using Arctic Pure™ Sanitize B

1. Add two pucks to floating dispenser and open to 7.
2. Add two tablespoons of Arctic Pure™ Refresh per 1000 litres (265 gallons) of water.
3. Test the Bromine level. Once bromine reads within the ideal range turn tablet

dispenser down to 2 or 3 (adjust as needed for bather load).

Important: Sanitize B & C are acidic and will decrease the Total Alkalinity. Regular testing and balancing of TA is extremely important with these products.

Weekly

1. Add two pucks to floating dispenser and reset to previous setting (or as needed).
2. Add two tablespoons of Arctic Pure™ Refresh per 1000 litres (265 gallons) of water.
3. Wait at least one hour and add 15 ml (1/2 ounce) of Arctic Pure™ Best Defense per 1000 litres (265 gallons) of water.

Using Arctic Pure™ Peak Boost

1. Add 2 1/2 tablespoons of Peak Boost™ per 1000 litres (265 gallons) of water, to establish a Bromide reserve.
2. Add two tablespoons or Refresh™ per 1000 litres (265 gallons).
3. Test the Bromine level. Ensure bromine reads within the ideal range (adjust as needed for bather load).

Using Arctic Pure™ Boost

1. Add 1 teaspoon of Boost™ per 1000 litres (265 gallons) of water.
2. Test the Chlorine level. Ensure Chlorine reads within the ideal range (adjust as needed for bather load).

Weekly

1. Twice a week test and adjust Total Alkalinity, pH and Chlorine or Bromine levels.

In **extreme cases** of source water with high minerals (such as some well water): add 15ml (1/2 ounce) per 1000 litres (264 gallons) of Arctic Pure™ Best Defense weekly.

The use of Clarifiers and Foam inhibitors is not recommended with Arctic Pure™ Disposable filters!

Common Spa Water Problems ~ Cause & Remedy

PROBLEM	POSSIBLE CAUSES	SOLUTIONS
CLOUDY WATER	A. Organic contaminants build up	A. Shock treatment with Refresh™.
	B. Suspended particles	B. Increase filter cycle or initiate Boost cycle
	C. pH high	C. Add Adjust Down™ until level reads 7.2 - 7.6
	D. Total alkalinity high	D. Add Adjust Down™ adjust T/A level to 100 - 130ppm
	E. Hardness too high	E. Add Best Defence™ until level reads 15 - 280ppm
	F. Poor filter	F. Dirty filter, replace with disposable filter
	G. High dissolved solids	G. Empty spa and refill
	H. Combined chlorine in the water	H. Shock treatment until combined chlorine is eliminated (see container instructions)
COLOURED WATER	A. Dissolved metals from equipment or water source	A. Use Best Defence™ and have your dealer check your water balance
	B. Low chlorine/bromine levels	B. Boost™ treatment and test chlorine/bromine levels
	C. Fragrance	C. Stop the use of fragrance
FOAMING	A. High concentration of oils and organics being agitated by the jets	A. Shock with Refresh™ B. Initiate Boost cycle
SCALE DEPOSITS	A. High Calcium level, high pH, high alkalinity	A. Drain partially, add Best Defence™, correct pH level to 7.2 - 7.6 and alkalinity to 100 - 130ppm
ODOR	A. High level of organic contaminants, combined with chlorine	A. Shock with Refresh™, add sanitizers
EYE/SKIN IRRITATIO	A. pH to low	A. Add Adjust Up™ until level reads 7.2 - 7.6ppm
	B. Combined chlorine due to high concentration of organic contaminants	B. Add Refresh™, add sanitizers Drain and refill spa if necessary
NO CHLORINE/ BROMINE READING	A. High concentration of contaminants using up sanitizers	A. Add sanitizers until levels are up to the recommended levels
	B. Test kit reagents ineffective	B. Replace at least once a year

Troubleshooting Spa Problems

1. **Nothing functions:** The GFCI Breaker has tripped or there is a power failure. Test GFCI Breaker. Turn breaker back on and see if spa powers up, if not contact your factory authorized dealer.
2. **Spa does not heat:** Check to see if the heat indicator is on or there are any error messages on the topside control panel. If the heat indicator is on and no error message appears contact your factory authorized dealer.
3. **Poor Jet Pressure:** First check to see that the jet(s) are turned on fully. Check your filter to see if its clogged or dirty. Next, check to see if the jet(s) are obstructed or if the venturi air dials are turned on. Finally, check to see if the jet(s) are surging. If so, your pump is cavitating (sucking in air). This usually occurs when the water level is too low and can be solved by adding water to the spa. If the problem still persists, contact your factory authorized dealer.
4. **Light is not functioning:** Follow the bulb replacement section to check and see if the bulb is burnt out. If so, replace it.
5. **Spa comes on by itself:** This function is normal when heating and filtering. No action required.
6. **Jet(s) are not spinning:** Remove jet barrel, by turning the jet counterclockwise until it pops out. Then irrigate the jet in the water (this will help remove any foreign particles that may be lodged in the bearings). If the jet(s) are still not spinning, it may be calcified. Try soaking the jet(s) in vinegar (be sure to immerse the bearings) for ten minutes. Then irrigate the jet(s) again and re-install. If problem persists contact your factory authorized dealer.
7. **Spa doesn't drain completely:** The spa is drained by gravity. It will not always drain fully. It is not necessary to drain the spa in its entirety except when winterizing the spa. If you wish to remove the last little bit of water, we recommend you vacuum it out with a wet/dry vacuum.

Important

This manual and its contents are subject to change without notice. Although Blue Falls Manufacturing has prepared this manual as accurately and precisely as possible, Blue Falls Manufacturing will not be liable for loss, injury or damages caused by improper servicing or by use of spa (improper or otherwise).

Arctic Spas are Canadian built with the finest materials and advanced technology to withstand the harshest weather conditions. Performance and Reliability is the Arctic Spas Customer Guarantee. If your spa cannot be repaired under our extensive warranty, Arctic Spas will provide a replacement spa equal in value to the original purchase price of the defective spa. Our philosophy Guarantees you Customer Satisfaction. These are words we will stand behind in writing.

Limited Warranty

Arctic Spas extends this limited warranty solely to the original purchaser of any Arctic self-contained spa installed. For the purpose of this document "customer" shall mean the original purchaser of the spa.

• LIFETIME SPA SHELL
Arctic Spas warrants the spa shell to the customer against water loss due to structural failure for as long as the customer shall own the spa.

• 5 YEARS SHELL SURFACE
Arctic Spas warrants the interior surface to the customer against blistering, cracking, peeling, delaminating, to the customer for 5 years from the original date of delivery.

•5 YEARS EQUIPMENT & COMPONENTS
Arctic Spas warrants the spa's equipment - specifically the spas electrical pack, control panel, factory-installed ozone system, pumps, heater and lights - against malfunction due to defects for a period of 5 years from the original date of delivery.

• 5 YEARS PLUMBING
Arctic Spas warrants the factory installed plumbing components - specifically jets, air injectors, glued fittings, plumbing, pipes, filter canisters and hoses - against water loss due to defect in workmanship and materials, to the customer for a period of 5 years, from the original date of delivery.

• WARRANTIES FOR STEREO & METAL CABINET
The Aquatremor Stereo system and all related parts are warrantied for One Year from original date of delivery. The Full Metal Cabinet is warrantied to be free from fading, blistering and peeling of the finish for Five Years from original date of delivery.

• WARRANTIES FOR OTHER COMPONENTS
The light lenses, fuses, headrests, filters, and cabinets are warrantied to be free of defect in workmanship and materials at the time of delivery.

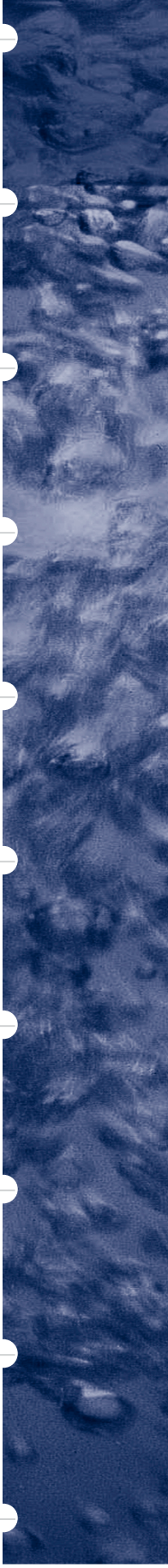
PERFORMANCE
To obtain service in the event of a defect or malfunction covered by this Limited Warranty, notify your Arctic Spa dealer as soon as possible and use all reasonable means to protect the spa from further damage. Upon proof of purchase, Arctic Spas' agent or its designated service representative will correct the defect subject to the terms and conditions continued in this Limited Warranty. There will be no charge for labor to the customer for a period of five years from the date of original delivery - specifically equipment, plumbing, shell surfaces or shell structure against malfunctions due to defect in the material and workmanship and within the Limited Warranty. If Arctic Spas determines that repair of the covered defect is not feasible; we reserve the right to instead provide a replacement spa equal in the value to the original purchase price as of the defective spa. Reasonable costs for the removal of the defective spa, and delivery and installation will be the responsibility of the spa owner. Freight will be paid to the nearest Arctic Spas distribution center.

CONDITIONS OF WARRANTIES
All warranties provided hereunder extend only to the original consumer purchaser of the spa if purchased and originally installed within the boundaries of Canada and United States. All warranties hereunder terminate upon transfer of ownership of a spa from the original consumer purchaser. Your limited warranty does not include repair travel mileage or for shipping cost assessed by your Factory Authorized Dealer or service agents. All events covered by this Limited Warranty hereunder must be repaired by a Factory Authorized Dealer of Arctic Spas. The warranties will not include any costs of repair incurred by a non-factory authorized agent. To obtain service, the customer must contact the Factory Authorized Dealer in his area. In the event that a spa or component thereof must be returned to Arctic Spas distribution center, all freight costs are the responsibility of the spa customer.

EXCLUSION
All warranties hereunder are void if the spa has been subject to alterations, misuse or abuse or any repair of the spa has been attempted by anyone other than a Factory Authorized Dealer of Arctic Spas. Alterations include but not limited to, any change to the components, replacement of components or addition of components without the written authorization from Arctic Spas. Misuse includes damages caused by improper non-certified electrical hook-ups, failure to operate the spa in accordance with the instructions contained in the owner's manual provided with the spa, including incorrect start-up procedures or dry firing of the spa, any use of the spa or any of its components in an application for which it was not designed, and damage caused by improper chemical balance, ice in the spa, overheating the spa or spa water or damage to the spa surface by allowing undissolved sanitizing chemicals to lie on the surface. Any damage caused by moving of the spa or improper installation is considered abuse and any damage to the material or workmanship of the spa cabinetry in shipping or handling are expressly excluded from the Limited Warranty.

DISCLAIMERS
Arctic Spas will not be liable for loss of use of the spa or other incidental or consequential costs, expenses or damages that may include but not limited to, the removal of a permanent sun deck, sunroom, gazebo, or other custom fixture. Under no circumstances shall Arctic Spas or any of its representatives be liable for any injury to any person or damage to any property, howsoever arising from the spa. Arctic Spas warranties are limited to a maximum amount of moneys received by Arctic Spas with respect to the sale of the spa.

ALL WARRANTIES
The warranties enclosed herein are all of the warranties provided by Arctic Spas to the customer, and to the extent permitted by law. Arctic Spas expressly excludes any warranties granted to the customer express or implied by statute or common law which exceed or conflict with the warranties set out herein. All warranties herein require that written notice of any claim must be given to Arctic Spas within ten days of the time the defect is discovered, and must be accompanied by the original customer's receipt confirming purchase of the spa, which indicated the date the purchase occurred. Failure to provide such notice and information invalidates all warranties provided thereunder. In the event a customer is unable to either obtain parts or satisfactory service from a Factory Authorized Dealer of Arctic Spas, notice should be given immediately to the service department of the agent where the spa was purchased and to Arctic Spas.



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